

WE CLAIM:

1. A computer program product readable by a computing system and encoding a computer program of instructions, the computer program product comprising:

a hardware protected region storing a portion of a computer basic/input output system comprising a compressed computer program operative to restore a portion of the computer basic input/output system when uncompressed and executed; and

a non-protected region storing the remainder of the computer basic input/output system.

2. The computer program product of Claim 1, wherein the portion of the computer basic input/output system stored within the hardware protected region further comprises an uncompressed computer program operative to uncompress the compressed computer program.

3. The computer program product of Claim 2, wherein the uncompressed computer program is operative to uncompress the compressed computer program in response to determining that a portion of the basic input/output system stored within the non-protected region is invalid.

3. The computer program product of Claim 2, wherein the portion of the computer basic input/output system stored within the hardware protected region further comprises an uncompressed computer program for detecting and initializing one or more random access memory devices within the computing system.

4. The computer program product of Claim 3, wherein restoring the portion of the computer basic input/output system stored in the non-protected region comprises replacing the portion of the computer basic input/output system stored in the non-

protected region with a computer basic input/output system stored on a mass storage device.

5. A method for utilizing compressed program code stored in a hardware protected region of a memory device of a computing system, the method comprising:

storing within the hardware protected region a portion of a computer basic input/output system comprising a recovery computer program operative to restore a portion of the computer basic input/output system when uncompressed and executed, the recovery computer program being stored in a compressed format;

storing within the hardware protected region an decompression computer program operative to uncompress a compressed computer program when executed, the decompression computer program being stored in an uncompressed format; and

storing within the hardware protected region a memory initialization computer program for detecting and initializing one or more random access memory devices within the computing system, the memory initialization computer program stored in an uncompressed format.

6. The method of Claim 5, further comprising:

upon an initial program load of the computing system, executing the memory initialization computer program to detect and initialize one or more random access memory devices within the computing system; and

copying the decompression computer program to a memory area provided by the one or more random access memory devices.

7. The method of Claim 6, further comprising:

executing the decompression computer program to decompress the recovery computer program to a memory area provided by the one or more random access memory devices.

8. The method of Claim 7, further comprising:

storing within a non-hardware protected region of the memory device a second portion of the computer basic input/output system, the second portion of the computer basic input/output system stored in a compressed format; and

executing the recovery program from the memory area to determine whether the portion of the computer basic input/output system stored in the non-hardware protected region of the memory device is valid.

9. The method of Claim 8, further comprising:

in response to determining that the portion of the computer basic input/output system stored in the non-hardware protected region of the memory device is valid, executing the decompression computer program to decompress the portion of the basic input/output system stored in the non-hardware protected region to a memory area provided by the one or more random access memory devices; and

executing the uncompressed portion of the basic input/output system stored in the non-hardware protected region from the memory area.

10. The method of Claim 8, further comprising:

in response to determining that the portion of the computer basic input/output system stored in the non-hardware protected region of the memory device is invalid, executing the recovery computer program from the memory area to restore the portion of the computer basic input/output system stored in the non-hardware protected region.

11. A computer-readable media comprising computer-executable instructions which, when executed by a computer, cause the computer to perform the method of Claim 5.

12. A computer-controlled apparatus operative to perform the method of Claim 5.

13. A method for utilizing compressed program code stored in a hardware protected region of a memory device of a computing system, the method comprising:

- generating a first executable computer program code segment;
- compressing the first executable computer program code segment;
- converting the compressed first executable computer program code segment to a raw data format;
- generating a second executable computer program code segment, the second executable program code segment operative to uncompress the compressed first executable computer program code segment;
- converting the second executable computer program code segment to a raw data format;
- generating a third executable computer program code segment, the third executable computer program code segment including the converted raw data for the first executable code segment and the converted raw data for the second executable program code segment; and
- storing the third executable computer program code segment in the hardware protected region of the memory device.

14. The method of Claim 13, further comprising:

- executing the third executable computer program code segment from the memory device, including copying the second executable computer program segment from the third executable computer program code segment to one or more random access memory devices of the computing system; and
- executing the second executable computer program segment to decompress the first executable computer program code segment from the third executable program code segment to a memory area provided by the one or more random access memory devices.

15. The method of Claim 14, further comprising:

executing the first executable program code segment from the memory area to determine whether a portion of the computer basic input/output system stored in the non-hardware protected region of the memory device is valid.

16. The method of Claim 15, further comprising:

in response to determining that the portion of the computer basic input/output system stored in the non-hardware protected region of the memory device is valid, executing the second executable program code segment to decompress the portion of the basic input/output system stored in the non-hardware protected region to a memory area provided by the one or more random access memory devices; and

executing the uncompressed portion of the basic input/output system stored in the non-hardware protected region from the memory area.

17. The method of Claim 15, further comprising:

in response to determining that the portion of the computer basic input/output system stored in the non-hardware protected region of the memory device is invalid, executing the second executable program code segment from the memory area to restore the portion of the computer basic input/output system stored in the non-hardware protected region.

18. The method of Claim 17, further comprising:

executing the second executable program code segment to decompress the restored portion of the basic input/output system stored in the non-hardware protected region to a memory area provided by the one or more random access memory devices; and

executing the uncompressed portion of the basic input/output system stored in the non-hardware protected region from the memory area

19. A computer-readable media comprising computer-executable instructions which, when executed by a computer, cause the computer to perform the method of Claim 13.

20. A computer-controlled apparatus operative to perform the method of Claim 13.